

Louisville Metro Air Pollution Control District
850 Barret Ave., Louisville, Kentucky 40204
22 July 2015

Federally Enforceable District Origin Operating Permit
Statement of Basis

Company: Cardinal Kitchens LLC

Plant Location: 203 Hiawatha Ave, Louisville, Kentucky 40209

Date Application Received: 07 February 2008 **Date Admin Complete:** 07 April 2008

Date of Draft Permit: 07 22 2015 **Date of Public Notice:** 06 17 2015

District Engineer: Kim Loechle **Permit No:** O-0460-15-F

Plant ID: 0460 **SIC Code:** 2499 **NAICS:** 337110

Introduction:

This permit will be issued pursuant to District Regulation 2.17- *Federally Enforceable District Origin Operating Permits*. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM_{2.5}); unclassifiable for the 2012 standard for particulate matter less than 2.5 micron (PM_{2.5}) and partial non-attainment area for sulfur dioxide (SO₂).

Application Type/Permit Activity:

☐ Initial Issuance

☐ Permit Revision

☐ Administrative

☐ Minor

☐ Significant

☒ Permit Renewal

Compliance Summary:

☐ Compliance certification signed

☐ Source is out of compliance

☐ Compliance schedule included

☒ Source is operating in compliance

I. Source Information

1. **Product Description:** Cardinal Kitchens LLC, manufactures kitchen counter tops, table tops, granite & laminate fixtures.
2. **Process Description:** Cardinal Kitchens LLC uses wet/water granite cutting machines and various saws, sanders and other woodworking machinery to cut granite and particleboard down to size per customer's specifications.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent to this facility
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Dust Collection System: E1--Saws for various woodworking processes. Particleboard contains less than one one-hundredth percent (0.01%) formaldehyde. E2—Two (2) sanders, one (1) gang saw, four (4) table saws, and one (1) sliding table saw. E3—One (1) wood chipper, make North Fab Sys, model F-3911342-64
U2	E4—Laminate gluing equipment for producing laminate boards (spreader, core spreader, belt conveyor, drying tunnel, edge spray, and index conveyor)
U3	E5—Four (4) spray booths for spraying adhesives, lacquer, and other coatings.
IA	Granite Cutting CNC Machines—wet/water cutting, uses water only to cut stone countertops. Natural Gas heaters (12, though 3 no longer work & there are no plans to fix them) used to heat the building.

5. **Fugitive Sources:** There are no fugitive emissions.

6. **Permit Revisions:**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
N/A	0060-97-F	04/22/1997	07/16/1997	Initial	Entire Permit	Initial Permit Issuance

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
R1	0060-97-F	05/30/2000	03/05/2000	Minor	General Conditions Pages 2-4	Incorporate revisions to General Conditions #4, #11, #12, and #13; New General Conditions #13 and #14
R2	0060-97-F	11/05/2001	09/20/2001	Major	94-00	Conversion of Construction Permit, 94-00-C to attachment
R3	0060-97-F	05/30/2003	04/13/2003	Renewal	Entire Permit	Permit Renewal
R4	O-0460-15-F	07/22/2015	06/17/2015	Renewal	Entire Permit	Permit Renewal; Incorporation of STAR Exemption, and Construction Permits, 538-08-C and 539-08-C

7. Emission Summary:

Pollutant	District Calculated Actual Emissions (tn/yr) 2009 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	0.119	No
NO _x	0.142	No
SO ₂	0.00085	No
PM ₁₀	0.205	Yes
VOC	4.57	Yes
Total HAPs	2.03	No
Single HAP	2.03	No

8. Applicable Requirements:

☐ PSD ☐ 40 CFR 60 ☒ SIP ☐ 40 CFR 63
☐ NSR ☐ 40 CFR 61 ☒ District-Origin ☐ Other

9. MACT Requirements: NA.

10. Referenced Federal Regulations in Permit: None.

II. Regulatory Analysis

1. **Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
2. **Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
3. **Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
4. **40 CFR Part 64 Applicability Determination:** The source is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources*.
5. **Basis of Regulation Applicability**

- a. **Plant-wide**

Cardinal Kitchens LLC is a potential major source for the pollutant PM₁₀. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the criteria pollutant PM₁₀ < 25 tn/yr, Total HAPs < 12.5 tn/yr and largest single HAP < 5.0 tn/yr, to be a FEDOOP STAR Exempt source as defined by Regulation 5.00, section 1.13.5. The source is not major for Greenhouse Gases.

Regulations 5.00 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Cardinal Kitchens LLC took the total plant-wide limits of 25 tpy for criteria pollutants 12.5/5.0 tpy for Total HAPs and single HAP to be a FEDOOP STAR Exempt source.

Regulation 2.17, section 5.2, requires monitoring, record keeping and reporting to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.

b. **Emission Unit U1 – Dust Collection System**

i. **Equipment:**

P/PE	Capacity	Install Date	Applicable Regulation	Basis for Applicability
E1: Saws for various woodworking processes.	N/A	1985	7.08	Regulation 7.08 establishes the requirements for PM emissions from new processes that commence construction after September 1, 1976.
E2: Two (2) sanders, one (1) gang saw, four (4) tables saws, and one (1) sliding table saw	N/A	2000		
E3: One (1) wood chipper, make North Fab Sys, model F-3911342-64	N/A	2000		

ii. **Standards/Operating Limits**

1) **PM/PM₁₀**

- (a) For E1, E2, and E3, subject to Regulation 7.08, the PM emissions standards are calculated per Section 3.2. The equation to calculate the hourly PM emission limit is $E = 3.59 * P^{0.62}$, where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.
- (b) Regulation 2.17, section 5.1, requires the source to operate the dust controls at all times emission points E1 and E2 are in operation.

2) **Opacity**

Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

c. **Emission Unit U2 – Post Form Operation**i. **Equipment:**

P/PE	Capacity	Install Date	Applicable Regulation	Basis for Applicability
E4: Laminate gluing equipment for producing laminate boards (spreader, core spreader, belt conveyor, drying tunnel, edge spray, and index conveyor)	N/A	2000	7.25	Regulation 7.25 establishes the requirements for VOC emissions from new processes that commence construction after September 1, 1976.

ii. **Standards/Operating Limits**1) **VOC**

Regulation 7.25 establishes that VOC emissions from equipment cannot exceed five (5) tons, plant-wide, during any consecutive 12-month period unless a BACT is submitted and approved.

d. **Emission Unit U3– Self Edge Operation**i. **Equipment:**

P/PE	Capacity	Install Date	Applicable Regulation	Basis for Applicability
E5: Four (4) spray booths for spraying adhesives, lacquer, and other coatings.	N/A	1985	6.09; 6.24	Standards of Performance for Existing Process Operations; Standards of Performance for Existing Sources Using Organic Materials

ii. **Standards/Operating Limits**1) **VOC**

Regulation 6.24, Section 3.3 establishes a standard of 3,000 pounds of organic materials per day and 450 pounds per hour, for Class III solvents or any material containing such solvent unless the discharge has been reduced by at least 85% by weight.

2) **PM/PM₁₀**

For emission points subject to Regulation 6.09, the PM emissions standards are calculated per section 3.2. The equation to calculate the hourly PM emission limit is $E = 4.10 * P^{0.67}$, where E is the allowable lb/hr PM emission limit and P is the process weight rate expressed in tons/hr.

3) **Opacity**

Regulation 6.09, section 3.3.1 and Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Operational Flexibility:** The source did not request any operational flexibility.
5. **Compliance History:**

Incid. #	Date	Regulation Violated	Settlement
00660	09/22/1993	Reg. 7.25 and Reg. 2.03 by exceeding the VOC allowable limit without a BACT analysis and without a permit	Company submitted a complete permit application.
04795	05/20/2008	Reg. 1.06, failure to calculate 12 month rolling total for VOC as required by permit	Company reported totals within time frame given by the compliance officer
05602	5/30/2008	Reg. 2.03, on-site inspection discovered unpermitted equipment and minor reporting problems	Company submitted permit applications within time frame given by the compliance officer
05966	04/01/2011	Reg. 2.03, missing info on compliance reports; blanks were left when "N/A" was required	No action due to the nature of the incident
06385	10/22/2012	Reg. 2.03, operating equipment without a permit; Reg. 1.06, failure to follow reporting requirements & calculations as stated in permits	Letter sent and company corrected the records and submitted applications on unpermitted equipment.

6. Calculation Methodology or Other Approved Method:

Dust Collection System U1: Emission factors from AP-42, Chapter 10.9, Table 10.9-7, Engineered Wood Products and “Log Debarking” from a previous edition of AP-42, Table 10.3-1, were used to determine Potential To Emit and confirm limits requested by the source. HAP emissions shall be determined based on lab analysis or the MSDS of the materials used in the lamination process.

7. Insignificant Activities

Equipment	Quantity	PTE (tpy)	Basis for Exemption
Granite Cutting CNC Machines—wet/water cutting, uses water only to cut stone countertops	2	N/A	Reg. 1.02, Appendix A
Natural Gas heaters used to heat the building	12	N/A	Reg. 1.02, Appendix A

- 1) Indirect heat exchangers, except furnaces that combust waste oil regardless of size, of the following types:
 - a) Those less than 10 million BTU/hr capacity using distillate oil, propane, butane, LPG, or natural gas as fuel, or
 - b) Those used solely for heating residential buildings not exceeding four dwelling units.
- 2) Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.
- 3) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 4) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.
- 5) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
- 6) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 7) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.